

Application No.: 10/559,646  
Response dated: April 24, 2008  
Response to Office Action of January 24, 2008

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**Amendments to the Claims:**

**Listing of Claims.** This listing replaces all prior listing of claims.

Claims 1-35 (Cancelled)

36. (New) An architectural coating composition comprising a film-forming binder polymer wherein the binder polymer is modified by the presence of a mixture which includes a protein and a polysaccharide, the mixture is bonded to or is in intimate mixture with the binder polymer, and the mixture contains less than 2 wt% of starch.
37. (New) The architectural coating composition of Claim 36 wherein the mixture is covalently bonded to the binder polymer.
38. (New) The architectural coating composition of Claim 36 wherein the mixture comprises an adduct of protein bonded to polysaccharide.
39. (New) The architectural coating composition of Claim 38 where the adduct is a proteo-xylan.
40. (New) The architectural coating composition of claim 36 wherein the mixture contains from 2 to 15 wt% of protein.
41. (New) The architectural coating composition of claim 36 wherein the mixture of protein and polysaccharide has been obtained from plant fibre.
42. (New) The architectural coating composition of claim 41 wherein the mixture of protein and polysaccharide has been obtained by the steps comprising:
  - a) wet or dry milling corn fibre to extract starch,
  - b) slurring the fibre in water at approximately 7 wt% solids and heating to about 90°C, and either
  - c) treating the fibre with about 1 wt% calculated on the fibre solids, of a thermally stable alpha amylase enzyme for at least one hour, and
  - d) filtering the fibre through a screen or a horizontal decanter to get rid of the solubilised starch and rinsing with water to yield the

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destarched fibre, or

- e) slurring the fibre in water and cooking in a continuous cooker where it is exposed to steam for a few seconds thereby solubilising the starch, and
- f) rinsing the fibre with water and filtering using a series of screens or a horizontal decanter to yield the destarched fibre, and then
- g) slurring the destarched fibre in water and raising the pH to 11.5 with sodium hydroxide or calcium hydroxide,
- h) raising the temperature to 95°C and adding an aqueous solution of hydrogen peroxide (33%) at about 10 wt% calculated on the solids of the destarched fibre,
- i) maintaining the temperature of the slurry at 95°C for about an hour and filtering to remove the corn fibre residue,
- j) reducing the pH to about 4.5 to form a precipitate, and
- k) filtering this to recover a solution comprising protein and polysaccharide.

43. (New) The architectural coating composition of claim 36 wherein the mixture of protein and polysaccharide is obtained by extraction from a fibre selected from at least one of the plants in the group consisting essentially of maize (corn), wheat, oats, barley, rice, sugar and beet.

44. (New) The architectural coating composition of claim 36 wherein the binder polymer and the protein and polysaccharide mixture form particles having a core shell structure.

45. (New) The architectural coating composition of claim 36 wherein the composition further includes rutile titanium dioxide.

46. (New) A film forming binder polymer, suitable for use in an architectural coating composition, wherein the binder polymer is chosen from the group consisting essentially of:

- a) acrylic polymers of alkyl esters of unsaturated carboxylic acids,
- b) vinyl polymers of mono-vinyl esters, and

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- c) styrenics, and
- d) the binder polymer is modified by the presence of a mixture which includes a protein and a polysaccharide,
- e) the mixture is bonded to or is in intimate mixture with the binder polymer, and
- f) the mixture contains less than 2 wt% of starch.

47. (New) The use, at ambient temperatures, of the film forming binder polymer of claim 36 in the coating of surfaces associated with buildings or in the coating of furniture or fittings found in or around buildings.